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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/737,033

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Jani Antero Mantyjärvi

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EXAMINER

LE, NHAN T

ART UNIT

PAPER NUMBER

2685

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/737,033

Applicant(s)

MANTYJARVI ET AL.

Examiner

Nhan T Le

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 December 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, 3-5, 8, 9, 11-14, 17, 18, 20, 22-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis (US 6,292,674) in view of Salazar et al (US 5,802,467)

As to claim 1, Davis teaches a terminal for a communication system, the terminal comprising a first detector arrangement (see fig. 4, numbers 406, col. 5, line 67) and a second detector arrangement (see fig. 4, number 408, col. 6, lines 1-4), the first and second detector arrangements of detecting a contact between at least one surface of the terminal and the skin of the user of the terminal (see col. 6, lines 1-5), wherein at least one function of the terminal is controlled based on signals from the first and second detector arrangements (see col. 4, lines 32-37). However, Davis fails to teach the detector arrangements (sensors) being based on different principles of detecting a contact between at least one surface of the terminal and the skin of the user of the terminal. Salazar teaches the first and second detector arrangements being based on different principles of detecting a contact between at least one surface of the terminal and the skin of the user of the terminal (see col. 22, lines 3-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

provide the teaching of Salazar into the system of Davis in order to prevent the phone operates when the user accidentally touches the detector arrangement.

As to claim 2, the combination of Davis and Salazar teaches the terminal according to claim 1, wherein a control operation is provided if at least one of the first and second detector arrangements output a signal that indicates a contact between the terminal and the skin of the user (see Davis col. 6, lines 1-5). The combination of Davis and Salazar fails to teach the terminal according to claim 1, wherein a control operation is provided only if the first and second detector arrangements both output a signal that indicates a contact between the terminal and the skin of the user. However, it is noted that in Davis at least one of the first and second detector arrangement output a signal also reads on both of the first and second detector arrangements output a signal as claimed. Therefore, it would have been obvious to one of ordinary skill in the art to modified the combination of Davis Salazar such that a control signal is provided only if the first and second detector arrangements both output a signal in order to prevent the phone operates when the user accidentally touch one of the detector arrangement.

As to claim 3, the combination of Davis and Salazar teaches the terminal according to claim 1 comprising a controller for controlling the at least one function of the terminal (see Davis fig. 1, number 22, col. 1, lines 45-55, col. 6, lines 1-5).

As to claim to claim 4, the combination of Davis and Salazar teaches the terminal according to claim 1, wherein switching between different modes of operation of the terminal is arranged to be triggered based on signals from the detector arrangements (see Davis col. 1, lines 45-55).

As to claim 5, the combination of Davis and Salazar teaches the terminal according to claim 4, wherein the terminal is switched between a standby mode and an active mode (see Davis fig. 8, numbers 800, 806, col. 7, lines 18-26).

As to claim 8, the combination of Davis and Salazar teaches the terminal according to claim 1, wherein the operation of an alarm producing means is controlled based on signals from the detector arrangements (see Davis fig. 8, number 810, col. 7, lines 32-37).

As to claim 9, the combination of Davis and Salazar teaches the terminal according to claim 1, wherein the detector arrangements are arranged to sense a contact between the terminal and the hand of the user (see Davis fig. 4, numbers 406, 408, col. 5, lines 65-67, col. 6, lines 1-5).

As to claims 11, 12, the combination of Davis and Salazar teaches the terminal according to claim 1, wherein one of the detector arrangements comprises a galvanic skin response detection arrangement, which is adapted to detect a gripping pressure caused by the hand of the user of the terminal (see Davis fig. 2, numbers 208, 210, col. 5, lines 29-50).

As to claim 13, the combination of Davis and Salazar teaches the terminal according to claim 1, wherein one of the detector arrangements is arranged to detect a pressure caused by the hand of the user (see Davis fig. 2, numbers 208, 210, col. 5, lines 29-50).

As to claim 14, the combination of Davis and Salazar teaches the terminal according to claim 13, wherein a predefined pressure pattern is arranged to be detected (see Davis col. 6, lines 65-67, col. 7, lines 1-14).

As to claim 17, the combination of Davis and Salazar teaches the terminal according to claim 1, wherein at least a part of at least one detector arrangement is provided in a detachable part of the terminal (see Davis fig. 2, number 204, col. 5, lines 29-32).

As to claim 18, the combination of Davis and Salazar teaches the terminal according to claim 1, wherein at least one of the detector arrangements is integrated in the cover material of the terminal (see Davis fig. 2, numbers 208, 210, col. 5, lines 28-35).

As to claim 20, the combination of Davis and Salazar teaches the terminal according to claim 1, wherein the control of the function is based on adaptive use of the information provided by the signals from the detector arrangements (see col. 4, lines 32-37).

As to claim 22, the combination of Davis and Salazar teaches the terminal according to claim 3, wherein the controller is adjustable so that the controller provides different control instructions for the function controlled by the controller depending on the settings of the controller (see Davis col. 4, lines 27-37).

As to claim 23, the combination of Davis and Salazar teaches the terminal according to claim 1, wherein the control of the function is based, in addition to signals from the detector arrangements, on temperature (see Davis col. 6, 1-5).

As to claim 24, the combination of Davis and Salazar teaches the terminal according to claim 1, wherein at least one of the detector arrangements is provided in a handset or headset of the terminal (see Davis fig. 4, numbers 406, 408, col. 5, lines 65-67, col. 6, lines 1-5).

As to claim 25, the combination of Davis and Salazar teaches the terminal according to claim 1, wherein the terminal comprises a mobile station of a radio communication system (see Davis abstract).

As to claim 26, the claim is rejected for the same reason as stated in claim 1 above.

As to claim 27, the claim is rejected for the same reason as stated in claim 2 above.

As to claim 28, the claim is rejected for the same reason as stated in claim 1 above.

As to claim 29, the claim is rejected for the same reason as stated in claim 1 above.

2. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davis (US 6,292,674) in view of Salazar et al (US 5,802,467) and further in view of Cairns (US 5,930,703).

As to claim 6, the combination of Davis and Salazar teaches the terminal according to claim 1, wherein a keypad of the terminal is operated based on signals from the detector arrangements (see Davis col. 7, lines 15-31). However, the combination of Davis and Salazar fails to teach a keypad lock. Cairns teaches the keypad lock (see col. 4, line 55- col. 5, line 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Cairns into the system of Davis and Salazar in order to prevent unauthorized users from operating the device.

3. Claims 7, 10, 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis (US 6,292,674) in view of Salazar (US 5,802,467) and further in view of Giel (US 5,881,377).

As to claims 7, 10, 15, the combination of Davis and Salazar fails to teach the terminal according to claim 1, wherein the operation of a display of the terminal is controlled based on signals from the detector arrangements; the detector arrangements are arranged to sense a contact between the terminal and the cheek and/or ear of the user, the detector arrangements comprises a capacitive proximity sensor. Giel teaches the terminal, wherein the operation of a display of the terminal is controlled based on signals from the detector arrangements (see col. 5, lines 12-23); the detector arrangements are arranged to sense a contact between the terminal and the cheek and/or ear of the user (see col. 5, lines 5-11), the detector arrangements comprises a capacitive proximity sensor (see col. 5, lines 5-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Giel into the system of Davis and Salazar in order to save terminal power (see col.6, lines 19-38 as suggested by Giel).

As to claim 16, the combination of Davis, Salazar and Giel teaches the capacity sensitivity sensor inside the terminal (see col. 5, lines 5-11). However, Giel fails to teach the capacitive proximity sensor is placed on the inner surface of a cover of the terminal or an accessory thereof. However, the above reference would not render the claim patentable over Davis, Salazar and Giel, because it would merely depend on where to place the capacity proximity sensor in the phone. Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination of Davis, Salazar and Giel such that the capacity proximity sensor is placed on the inner surface cover of the phone so that the proximity could be more easily detected.



4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davis (US 6,292,674) in view of Salazar (US 5,802,467) and further in view of Budd (US 6,360,104).

As to claim 19, the combination of Davis and Salazar fails to teach the terminal according to claim 1, wherein at least one of the detector arrangements comprises at least three sensor elements, the at least three sensor elements being arranged in an array on the surface of the terminal. Budd teaches the terminal, wherein at least one of the detector arrangements comprises at least three sensor elements, the at least three sensor elements being arranged in an array on the surface of the terminal (see fig. 5, numbers 140, 142, col. 5, lines 33-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Budd into the system of Davis and Salazar in order to detect user's holding regardless of the actual location of user's finger (see col. 5, lines 40-45, as suggested by Budd).

5. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davis (US 6,292,674) in view of Salazar (US 5,802,467) and further in view of Nakajima (US 5,740,523).

As to claim 21, the combination of Davis and Salazar fails to teach the terminal according to claim 1, wherein the sensitivity of at least one of the detector arrangements is adjustable. Nakajima teaches the terminal, wherein the sensitivity of at least one of the detector arrangements is adjustable (see col. 13, lines 23-33). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Nakajima into the system of Davis and Salazar in order to

achieve the detection sensitivity within the range of the tolerance of the electrical component (see col. 13, lines 33-38, as suggested by Nakajima).

### ***Response to Arguments***

Applicant's arguments filed on 09/24/2004 have been fully considered but they are not persuasive.

Regarding to claim 1, Applicant argues that Salazar does not teach detectors that are based on two different principles of sensing. The examiner disagrees. Salazar discloses the sensors detect physical phenomena differentials between the sensors and the external environment and the human skin, external devices brought into contact or close proximity to the sensor (see col. 22, lines 3-20). Therefore, Salazar clearly teaches the two different principle of sensing contact between a terminal and a user's skin.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T Le whose telephone number is 703-305-4538. The examiner can normally be reached on 08:00-05:00 (Mon-Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nhan Le

*Nguyen T. Vo*  
1-23-2005

**NGUYEN T. VO**  
**PRIMARY EXAMINER**